

UNC Asheville

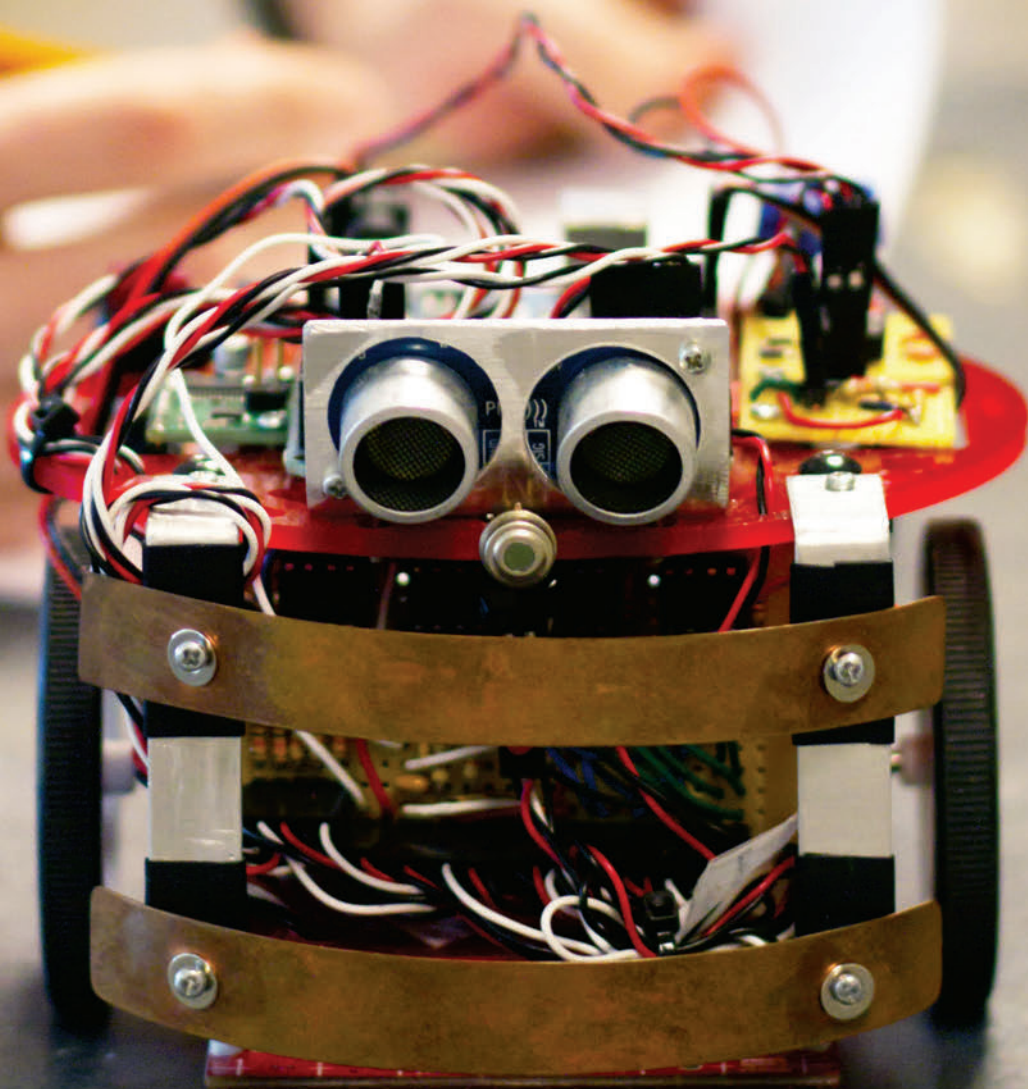
Volume 5, No. 1 • Fall/Winter 2012

MAGAZINE

Inside:
A Story of Desegregation
Saving Eastern Hemlocks
Passport to China and Tuscany

Where Creativity Meets Precision

An inside look at the
Mechatronics Program



UNC asheville MAGAZINE

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UNC Asheville enrolls more than 3,700 full- and part-time students in more than 30 programs leading to the bachelor's degree as well as the Master of Liberal Arts. The university is committed to equality of educational opportunity and does not discriminate against applicants, students or employees on the basis of race, color, national origin, religion, gender, disabling condition or sexual orientation.

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As friends and supporters of UNC Asheville, you know that we have established a proud tradition of excellence in the kind of education that truly changes lives. By nurturing the critical-thinking skills our citizens need to be successful in their careers, the UNC Asheville experience enriches our students' capacity to live creative lives and improve their communities.

As a university, we can't do this in isolation; it's an endeavor advanced by linking arms with others who share our passion for a brighter future for North Carolina. In this issue, you'll learn about a just a few of those linkages.

The efforts of faculty member Kitti Reynolds and her students to help find a solution to the imminent loss of hemlock trees in the Southern Appalachians represents a key partnership between UNC Asheville and the USDA Forest Service Southern Research Station, whose headquarters is hosted on our campus.

And I know you'll enjoy learning about our Mechatronics program, where art meets science for the precision control of mechanical and machine systems. To do this program well, UNC Asheville joined forces with N.C. State University to develop a joint degree program that's been pursued with strong interest by highly accomplished students on both campuses.

PONDERings

There are dozens of examples of successful partnerships with organizations, including Mission Hospital, Asheville Buncombe Regional Sports Commission, and the City of Asheville, the last of which began working with UNC Asheville's National Environmental Modeling and Analysis Center (NEMAC) after widespread flooding here followed back-to-back

hurricanes in 2004. The city is using the modeling tool they developed together in planning to mitigate the effects of the future floods.

We are thrilled to serve our community in this way, and we invite you to visit our website, www.unca.edu, to learn about the new ideas that are coming to fruition every day.

—CHANCELLOR ANNE PONDER

"This is an endeavor advanced by linking arms with others who share our passion for a brighter future for North Carolina."

—CHANCELLOR ANNE PONDER



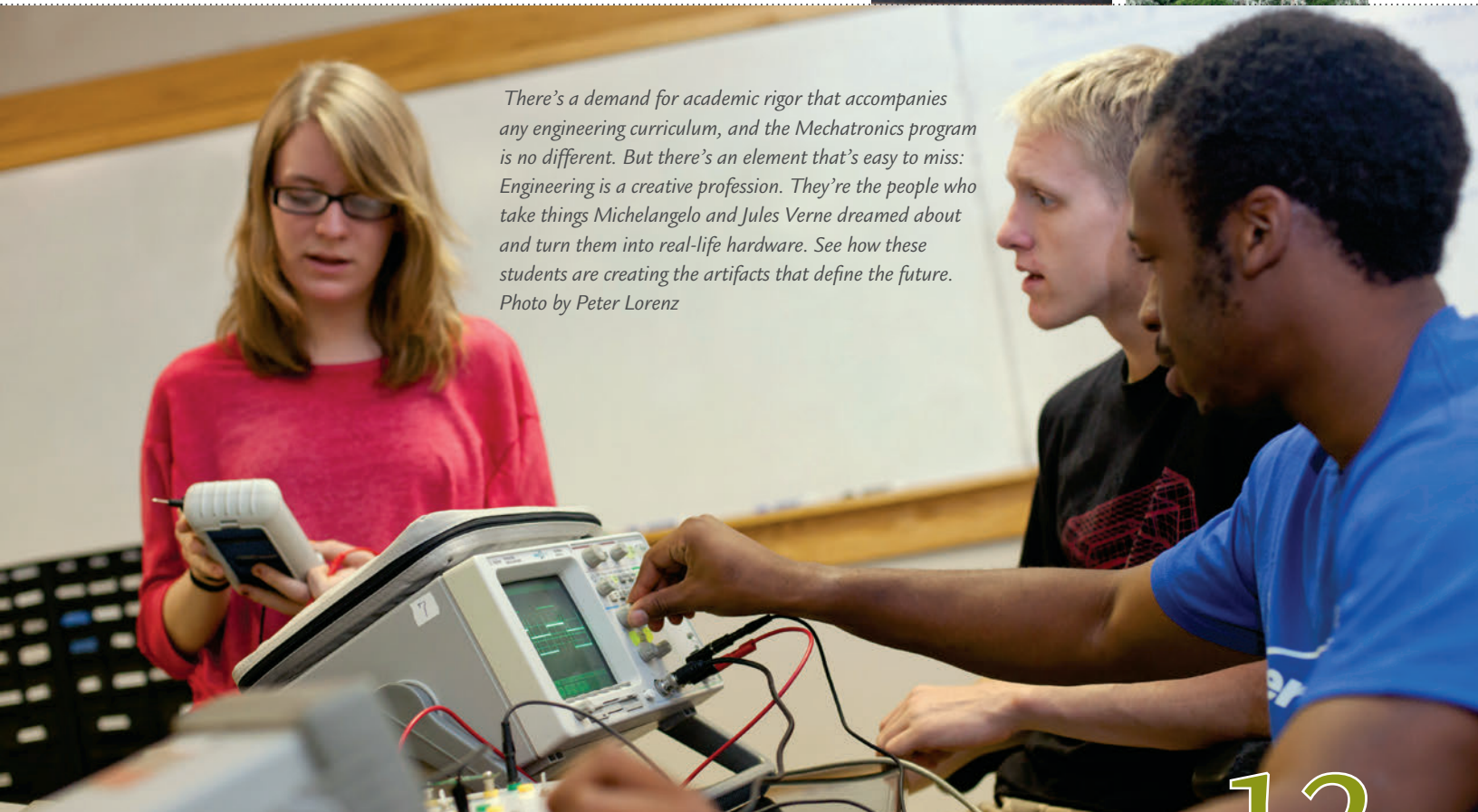
GALEN MCGEE

Bud Mayfield (left) of the USDA Forest Service and UNC Asheville student Dustin Neufeld '13 are part of a research collaboration to develop an integrated approach to the management of the hemlock woolly adelgid.

on the cover

12 MECHATRONICS: HOW A LIBERAL ARTS EDUCATION SHAPES A TOP-NOTCH ENGINEER

Imagine having a great job waiting after graduation—with an employer ready to fund your master's degree. Students and faculty from this joint degree program explain what makes it spark.



There's a demand for academic rigor that accompanies any engineering curriculum, and the Mechatronics program is no different. But there's an element that's easy to miss: Engineering is a creative profession. They're the people who take things Michelangelo and Jules Verne dreamed about and turn them into real-life hardware. See how these students are creating the artifacts that define the future. Photo by Peter Lorenz

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on the back:
 swim team makes a splash

“SUPERBOWL” OF EMERGENCY MANAGEMENT

UNC Asheville Director of Emergency Management
on duty at the Democratic National Convention

NOT-SO-SECRET SERVICE:

Last year, Director of Emergency Management Dave Weldon (below) left a state job in public safety to lead the university's Office of Emergency Management. Then he got tapped to help coordinate emergency planning for the Democratic National Convention in Charlotte.

DAVE WELDON IS accustomed to being ready for anything. When he left the North Carolina Department of Crime Control and Public Safety in 2011 to work as the director of emergency management at UNC Asheville, his closing-act emergency management project was Hurricane Irene.

But his next assignment was a biggie: Weldon was invited to work at the Emergency Operations Center at September's Democratic National Convention in Charlotte. Weldon took on that responsibility while “on loan” from his regular job at UNC Asheville.

“It was an event that took nine-plus months to plan, and it encompassed an entire city, using mutual aid resources from all over the U.S.,” Weldon said.

“Our role was to support the event with resources as they were needed,” Weldon said, “and to plan and work with other agencies and

with the medical groups to make sure we had everything in place.”

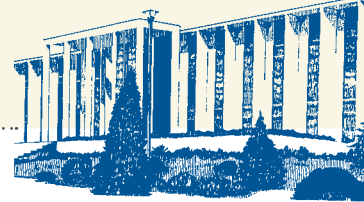
That meant bringing in everything from sandbags when heavy rains threatened to flood the area, to bed-bug-sniffing dogs when a number of officers staying in a nearby hotel broke out in a rash.

“Even an outbreak of upper respiratory illness in a group of people had to be investigated,” Weldon said, “to make sure it was just a coincidence and not somebody trying to do something to that group.”

“To sum it up in sports terminology, it's the Super Bowl of emergency management,” Weldon told UNC Asheville Magazine. Even so, he said, for him the event was not about the glamour and the handshaking with politicians. It's about knowing “that at the end of the day, nothing bad happened and everybody went home safely.”

“It was an event that took nine-plus months to plan, and it encompassed an entire city, using mutual aid resources from all over the U.S.” —Dave Weldon, director of emergency management at UNC Asheville





PHOTOS BY PERRY HEBARD

LEGACY OF LEADERSHIP:

Above: Former Chancellor David Brown and his wife, Lin, near the sign that bears the building's new name. Inset, left: Chancellor Anne Ponder awarded the Chancellor's Medallion to Lin Brown.

A FITTING TRIBUTE

Chancellor Emeritus honored in renaming of University Hall

MORE THAN 250 FRIENDS, family and well-wishers from across the Asheville community gathered in September to celebrate the legacy of UNC Asheville's Chancellor Emeritus David Brown with the renaming of University Hall as Brown Hall.

"This is really a celebration of Team UNCA, 1980s," Brown told the crowd. "It's about the students, faculty, administrators and legislators that enabled us to take some incredible risks, and frankly, to win most of them." Brown served as chancellor from 1984 to 1990, and oversaw the creation of lasting campus institutions, such as the National Conference on Undergraduate Research and the N.C. Center for Creative Retirement (now called the Osher Lifelong Learning Institute), both national exemplars. Chancellor Ponder also honored Brown's wife, Lin, an educator in the field of gerontology, awarding her the Chancellor's Medallion for her role as founding director of the College for Seniors at NCCCR.

VIP VISIT

Vice President Biden rallies UNC Asheville

AN OVERFLOW CROWD of 1,320 filled UNC Asheville's Justice Center for an Oct. 2 campaign rally with Vice President Joe Biden, staged by the Obama/Biden campaign along with two student groups, College Democrats and

Students for Obama. Appearing on stage with Vice President Biden were U.S. Rep. Heath Shuler (D-N.C.); Lt. Governor Walter Dalton; James Whalen, with Students for Obama; Caitie Gibbs, with College Democrats; and

Student Government Association President Ben Judge. Those who couldn't get a seat watched the rally via monitors in the Student Recreation Center, as Biden spoke about the importance of access to higher education.

“Any nation that out-educates us will out-compete us.” —Vice President Joe Biden



LEFT: Vice President Joe Biden addressed the crowd at the Justice Center. BOTTOM: The Vice President met with Chancellor Anne Ponder (left), before taking time to visit the women's volleyball team (right). After canceling their practice to make way for the Vice President's rally, the team was thrilled when the VP delivered his thanks in person.



PHOTOS BY PERRY HEBARD



click it: To see a video of the rally, go to <http://bit.ly/T4PI0v>.

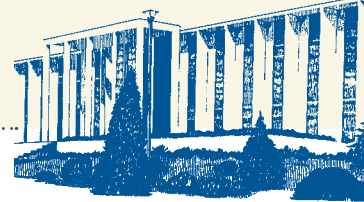


PHOTO COURTESY OF JACK DERBYSHIRE

IDEA FACTORY

TED^x coming to campus in February

UNC ASHEVILLE grows ideas worth spreading. That's why Jack Derbyshire, UNC Asheville junior, is bringing TED^x to campus.

The full-day event, set for February 2, 2013, will include a broad selection of speakers and performers, ranging from a biochemistry and philosophy student discussing the intersection between his areas of study, to the Asheville Ballet.

"The one commonality is going to be really passionate people who won't talk over your head," said Derbyshire.

Not your typical lecture series, TED^x is based on the popular TED Talks, featuring titles such as "An Animated Tour of the Invisible." The audience can expect

a "conversational, motivational, inspirational talk, within three to 18 minutes," Derbyshire said.

Derbyshire's tasks in coordinating this event include recruiting, selecting and training speakers. "A lot of it is just looking for people who are really passionate about what they do," said Derbyshire, noting that the number of creative, enthusiastic people at UNC Asheville makes it a tough decision.

It's about equal-opportunity creativity. "One of the greatest things about ideas is, they can be shared with anyone. Just by saying 'Yes, I like this'—you own it, and you can share it with others."

Which is what UNC Asheville is all about.

TED^x EVENT ORGANIZERS: *Clockwise from top right: Andrew Benbow, Sierra Bicking, Anna Koeferl, Paloma Vazquez, Alyssa Belcher, Jack Derbyshire.*

MLK WEEK

Remembering the Past, Looking to the Future



Jan. 21–25

Join us for a week-long campus observance promoting the work of Dr. Martin Luther King Jr. In January, check for workshops, film screenings and volunteer work days at msp.unca.edu.

Remembering the Past: The Parchman Hour

8 p.m. Tues., Jan. 22

Lipinsky Auditorium

This Mike Wiley production brings to the stage powerful oral histories and conversations from the Freedom Riders, including Stokely Carmichael, Martin Luther King Jr. and Robert Kennedy. **Free and open to the public.**

Looking to the Future: Gwendolyn Boyd, MLK Week Keynote

7 p.m. Wed., Jan. 23

Lipinsky Auditorium

Keynote speaker Gwendolyn Boyd was the first African-American woman to earn an M.S. in mechanical engineering at Yale University and has been recognized as one of the 100 Most Important Blacks in Technology by the Black Engineer of the Year Awards. **Free and open to the public.**



PHOTO COURTESY OF VIRGINIA DERRYBERRY

« Peaceable Kingdom by Virginia Derryberry

Katherine Min, assistant professor of Literature & Language, was awarded the Sherwood Anderson Foundation Fiction Award for 2012. Her fiction was chosen for “its wisdom, its insight into human nature, and its fresh, surprising, yet unaffected language.” Min’s writing has received notice in other venues; her debut novel, “Secondhand World,” was a finalist for the PEN/Bingham Prize, an award given for literary achievement and great promise in debut writings.

Katie Johnson, senior art student and former president of Art Front, an organization designed to involve students in cultural and art-related activities, will be co-curating an upcoming project on “outsider art” with Leisa Rundquist, assistant professor of Art, at the Asheville Art Museum in 2013.

HONOR SOCIETY

What’s noteworthy as students and faculty take the honors

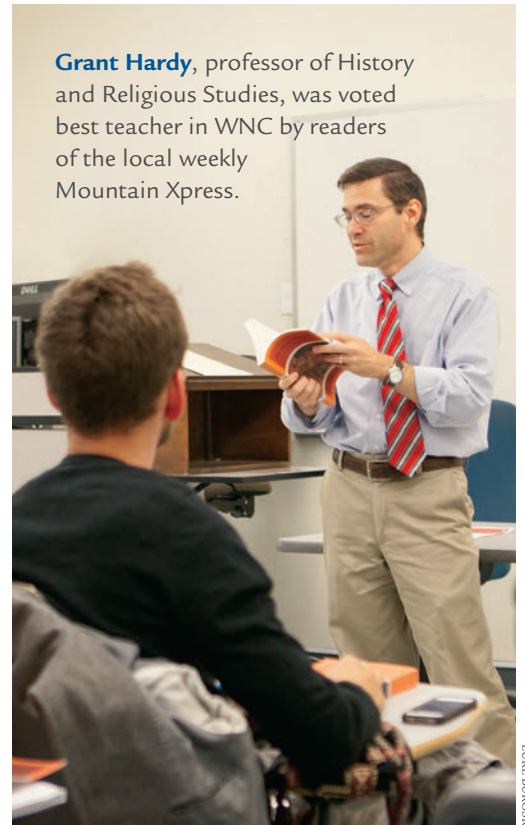
Virginia Derryberry, chair and professor of Art, opened her solo exhibition, “Third Nature,” featuring paintings on canvas and related “costume constructions” that present a three-dimensional perspective on the painted works. The exhibit, held from Sept. 13 through Dec. 8, is displayed in the Neil Britton Art Gallery at Virginia Wesleyan College in Norfolk, Va., and was featured in Veer Magazine as the number-one pick in its Visual Arts Top Five.

Tracey Rizzo, associate professor of History, and Steven Gerontakis ’13, post-baccalaureate History student, have signed a contract with Oxford University Press to publish their book, “Body and

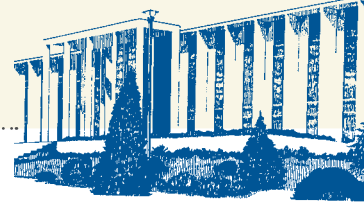
Gender in the Age of Empire.” The book, set to be published in 2015, explores how imperialism affected everyday life in Europe’s colonies between 1750 and 1950.

Caitlyn Byrd ’11, mass communication alumna, was awarded second place for Best Health Story from the National Newspaper Association in August. On staff at Mountain Xpress, Byrd received the award for her investigative story, “Is There a Doctor in the House?,” exploring the challenges small doctors’ offices face, and the impact of the impending shift toward their collaboration with large hospitals.

Grant Hardy, professor of History and Religious Studies, was voted best teacher in WNC by readers of the local weekly Mountain Xpress.



LUKE BUCOSKI



OVERLOOK HALL

Living on campus gets a serious upgrade

THE UNIVERSITY'S NEWEST residence hall opened just in time for the fall semester—not a moment too soon for upperclassmen who've wanted to stay on campus. With Overlook Hall's addition of 300 beds, more than 40 percent of the student population is living on campus. Check out some of the other great things it brings to the university!



ABOVE: *Students can eye their books—or the fifth-floor views—from the study lounge at Overlook Hall.*

RIGHT: *A residence hall “designed by students for students.”*



PHOTOS BY LUKE BUKOSKI

Smart design » Architects interviewed many current students to find out what they wanted in a residence hall. The results include laundry facilities that are no more than one floor away from all bedrooms; wireless Internet access; suites with rooms having one or two beds; multiple showers per suite; and a sandwich deli that's open until 2 a.m.

Sustainable energy » The building is served by a new geothermal system that cools and heats Overlook Hall for a fraction of the energy used by a traditional system. Governors Hall and Governors Village also will use Overlook's geothermal system.

Rooms with a view » True to its name, Overlook has 10 study lounges that feature floor-to-ceiling windows, offering views of the athletic fields and the Botanical Gardens. One lounge has the distinction of being the only rooftop study lounge on campus.

Breaking the Color Barrier

WRITTEN BY JON ELLISTON » PHOTOS BY PETER LORENZ

Etta Mae Whitner Patterson helped desegregate her hometown before becoming the first African-American student at its college



“It was a terrible thing to go downtown and see a water faucet marked ‘White’...and one marked ‘Colored.’”

Etta Mae Whitner Patterson’s education happened during a tidal wave of social change that she helped drive ashore. An Asheville native, Patterson was the first black student admitted to Asheville-Biltmore College, UNC Asheville’s predecessor, in the fall of 1961. “We were right on time, and everything just came together,” she remembers of the struggles she joined to desegregate Asheville’s public spaces. Now 69, she has vivid memories of her time in the trenches of the civil rights movement.

During her teens as a student at Stephens-Lee High School, Patterson became an early leader in ASCORE, the Asheville Student Committee on Racial Equality. The group, which practiced nonviolent resistance, was the catalyst for breaking the deep-rooted tradition of segregation in downtown Asheville.

Because she was raised in separate and unequal schools that lacked the resources of local white schools, higher education presented Patterson with a whole new series of challenges. She remembers her time at college as a “pressure cooker” of a situation that she was ultimately ready to leave. But while it was a trying time, “I look back on it with no regrets,” she says.

“I’ve been given a lot of lemons, and I’ve had to make a lot of lemonade,” she says with a hearty gust of laughter. Below are excerpts of our recent conversation with her.

Where did you grow up?

Five blocks from the tunnel, on Hildebrand Street [in Asheville’s East End neighborhood]. I could actually draw the community, because that’s how well I knew it. Everybody knew who lived in every house. Our village raised us. Our village corrected us. I wish we had that now—we don’t have a village. That whole area was very close-knit.

So growing up, you knew a lot of the kids around you?

Yes. We literally lived together. I call myself a Metho-Baptist [because of all the churches she frequented].

You got a full childhood of religion, didn’t you?

We respected our religion. There could never have been an ASCORE had we not had that training. They didn’t teach us to hate: We were not to hate a person because they were white, we were to hate the behavior, the segregation, the Jim Crow. Because we knew we were not born inferior.



FEATURED SOPHOMORE: *For the 1963 UNC Asheville Summit yearbook, Patterson was photographed standing on the Phillips Hall breezeway, with Rhoades Hall in the background.*

I don’t remember having any fear, I really don’t. Even coming to the college, I didn’t have fear. I had some reservations; I didn’t know what I was going to meet and what challenges. But when we were marching in the street, we did what we had to do. We knew segregation was wrong, so we stood up to what was wrong.

So you were in high school when ASCORE was founded and you became active pushing back against bigotry.

We started with discussions about segregation. It was a terrible thing to go downtown and see a water faucet marked “White,” engraved into the marble above it, and one marked “Colored.” The white ones were clean, the colored ones were dirty and not sanitary. We knew that was wrong.

ASCORE evolved, as we began to organize in 1958. We discussed strategy, and we practiced things. We practiced being slapped, and what our reaction would be to it. Being spat upon. Being talked about. Being kicked around. And we adhered to the teaching of Dr. Martin Luther King, who adhered to the Lord’s teaching: If a man slaps you on the cheek, you turn the other one. We were trained how to sit at the lunch counters, where we understood we were going to be rejected.



How did ASCORE decide which segregated businesses to target with protests?

First of all, we negotiated. We made appointments with the managers and the powers that be at the different places. The emphasis was on the lunch counters, and segregation in public places like the library. Many of the businesses would say anything to delay, to put us off. Unfortunately, we had to pressure them, with marches and boycotts.

You graduated from high school in 1961. What drew you to Asheville-Biltmore College?

I was chosen [by leaders in her community], because at the time, somebody had to go that was going to be representative of the black community, who was not going to be overly violent or aggressive, who was going to be able to compromise when needed, negotiate and get along. I must confess, I did not want to go; I didn't want to blaze a trail. But all my friends had gone to college, and I was there by myself. And I really did want to go to college, but in a different town to get out of the controversy. They chose me to be the representative to go in, and I accepted the challenge.



A PERSONAL HISTORY:

Patterson maintains an extensive home archive documenting her life and times. Above: leafing through the 1963 UNC Asheville yearbook. Left: a photo from that yearbook, with Patterson pictured as a member of the French Club.

“I was aware that I was not only representing myself, I was representing the black race. Therefore, I knew I had to be “smarter than,” I had to be perfect in everything I did.”

That was a lot to take on.

Oh, it was. Because at that time I was aware that I was not only representing myself, I was representing the black race. Therefore, I knew I had to be “smarter than,” I had to be perfect in everything I did. And unfortunately I was none of that. I definitely wasn’t “smarter than.” That frustrates me even now: I’m 69 years old, and that’s something I’ve really had to overcome personally, that I was not as successful academically as I should have been.

When you were growing up, and in high school, you were surrounded by a support network, and now you’re in college, and you’re on your own.

On my own. This is not that important, but just think: I couldn’t date nobody. I’m right at the age where I want to date and go out. I’m a young adult. But I couldn’t do that, because if I was ever associated with any of those guys, it would have been very negative for me. I had some very good white female friends, and we developed a close relationship. But even as close as we were, we could not have been as close as I was to the people I had just left, because we lived in different communities. Socially, I did have a wonderful time at the college.

How were you received by professors and staff?

They were professionals, and they treated me well. But I feel like I was a challenge to them because I was so far behind.

What did you do after college?

I married a man who was in the service, and we ended up settling in Greenville, S.C. I was quite active in the community there, not so much in racial organizing, but more in jobs, housing, and drug prevention.

In 1968, I got a job as the first black woman cashier in a store downtown, a discount store. There were registers at the front and the back; of course, I was on the back register. And I worked for years as a substitute teacher in the public schools.

Is there anything you’d like to add?

I just want to say to the young people, both black and white: You need to think about others. Get an education so that you can help somebody. We are here to help each other.

Last summer, Chancellor Anne Ponder hosted some 125 guests, including Patterson, during the Stephens-Lee High School 50th Reunion event at the Janice W. Brumit Pisgah House. Members of the Asheville Student Committee on Racial Equality (ASCORE) organization were recognized and honored for their courageous work toward racial parity.



THEN AND NOW: Left: Patterson holds her great-granddaughter, Aubri. Above: Patterson stands at the left of the group of three young women posing against a car parked on Eagle St. in downtown Asheville, while a fourth leans against the wall; Beaucatcher Mountain rises in the background.

cover story

Mechatronics

How a liberal arts approach
shapes a top-notch engineer...

WRITTEN BY KAREN SHUGART

PHOTOGRAPHS BY PETER LORENZ





ics

- Drew Cornett has already secured something many college students hope for: A well-paying job awaits him when he graduates. Better yet, his future employer wants to fund his graduate degree. What's Cornett's secret to success?

Drew Cornett, a 24-year-old engineering major from Boone, is studying mechatronics at UNC Asheville, a degree concentration that is garnering a lot of attention these days. After spending two summers as an intern at BAE Systems, the British multinational defense and aerospace company, Cornett has received assurance of his future with the company. “I have no worries at all—zero—that I will find a job,” Cornett said. “Especially with mechatronics.”

Dakota Lazenby, who is 20, agreed. “My initial thought on the degree was that it was something I could look forward to doing every day.” But the career-placement rate is a solid plus. “The promising salary and the ease of getting a job after doing this degree are definitely some of the driving forces that keep me focused,” Lazenby said.

More than just robotics

Though the discipline is well known among engineers, mechatronics hasn’t yet become a household word. While often explained as robotics, practitioners are quick to add that it’s much more. Mechatronics blends mechanical and electrical engineering with computer science for the operation of machinery, explained Dr. Yusef “Joe” Fahmy, director of the mechatronics program. “A robot is a

computer-controlled machine,” he said. “So is the engine in your car. Whenever we employ a computer to operate machinery, that’s mechatronics.”

As the only program of its kind in North Carolina—and one of only two accredited undergraduate programs like it in the United States—the program is a joint venture of UNC Asheville and North Carolina State University. While the former is recognized for its broad liberal arts education, the latter is known for producing scientists and engineers. Through the program, students earn a joint degree from both universities.

The result, Fahmy said, is a graduate who’s versed in mechanical and electrical engineering as well as computer science, with a good helping of liberal arts studies—in short, someone who has the technical skills to create new devices, and the communication skills to explain them to most anyone.

About 100 students have graduated with the joint degree, but the program is having a bigger impact than those numbers might suggest.

“The beauty of the whole thing is that our graduates are employed in the region, in these excellent firms,” said Fahmy. “Shortly before graduation I start getting phone calls from graduates, saying ‘We’ve got two positions for somebody that

“Engineering is a creative profession...We’re the people who take things Michelangelo and Jules Verne dreamed about, and turn them into real-life hardware.”

— David Erb, Lecturer, Mechatronics program





would be interested in modeling refrigeration systems or robotic control of material handling...Who do you know?"

The bulk of the engineering courses are taught by N.C. State faculty, while UNC Asheville faculty provide the liberal arts foundation. Many engineering classes are delivered live from Raleigh, with students in Asheville posing questions and participating in class discussions via video-conference. About one-third of the engineering coursework is taught on-site, while two-thirds is beamed from Raleigh. Fahmy himself is based in Asheville, though he is an N.C. State employee.

A robust mix of hard science and liberal arts, the 126-credit-hour curriculum doesn't allow much room for electives in a student's four years, Fahmy said. Though traditional-age students are in the majority, the mechatronics program attracts a substantial number of older students.

"It's definitely a challenging program," said Hallie Sheaffer, a 34-year-old senior from Asheville, who learned about mechatronics from a newspaper article. At the time, she was looking for a new career; she'd left a job teaching middle school band to become a real estate agent, just as the housing market nose-dived.

Jennifer Cory, 41, a junior, had a bachelor's degree in history from George Mason University when she applied to the program. She'd worked in finance before staying home to care for her children. Then her husband lost his job. This time, she wanted to get a degree in a high-demand discipline.

The program's track record was attractive: about 90 percent of graduates are employed before graduation; starting salaries average about \$55,000.

"I realized that the jobs that were hiring were skilled jobs," Cory said.

In fact, it was industry demand that drove the creation of the mechatronics concentration. Asheville-area manufacturers wanted a local source of engineering specialists. After conferring with industry representatives, university officials decided that Western North Carolina would be best served by a broad-based engineering program like mechatronics.

"We exist because local industry wanted us here," said program instructor Dave Erb, now in his fifth year teaching in the program. Erb feels that graduates are an excellent fit for industry. "They're trained to view the whole of engineering as one piece, and I think industry really appreciates that."

Local employers took notice from the beginning. Jerry Krug, manager of advanced manufacturing at Meritor, said the program gives graduates an excellent set of diverse skills. The Michigan-based company, which makes parts for military suppliers, trucks and trailers and has facilities in Fletcher, N.C., has hired several graduates.

"Instead of having multiple disciplines involved in a project—typically you have a mechanical engineer, an electrical engineer, and a controls engineer—companies can rely on one individual with a mechatronics degree to handle all aspects of the project," Krug said.

Local investment

Meritor, Eaton and other local manufacturing companies have rewarded the program with strong scholarship support as well as mentoring and guidance, even on senior projects.

“Having a local resource to train engineers in the area is a huge benefit to Meritor and other manufacturers,” Krug said. “In addition, a local candidate is more likely to stay in the area long-term.”

Increasingly, Fahmy said, students are receiving job offers from multinational corporations further away, such as BMW, Kyocera, and BAE Systems Inc.

Solid prospects are attractive to students such as Lazenby, who said he’d always enjoyed building things and figuring out how they worked. This fall, his class was building a cargo-sorting robot that picks up blocks from a loading zone and deposits them in specific sites.

In another class, Erb said, students build “sumo” robots—the object is for one robot to push another out of a circle. “What happens with projects is they love them,” Erb said. “They end up spending inordinate amounts of time because they love this work.”

A group of seniors is working this year on a fountain that interacts with people, using sensors to detect movement.

“If you raise your hand, the fountain will go up,” Erb said. “It’s kind of an artsy project but with a strong mechatronics underpinning.”

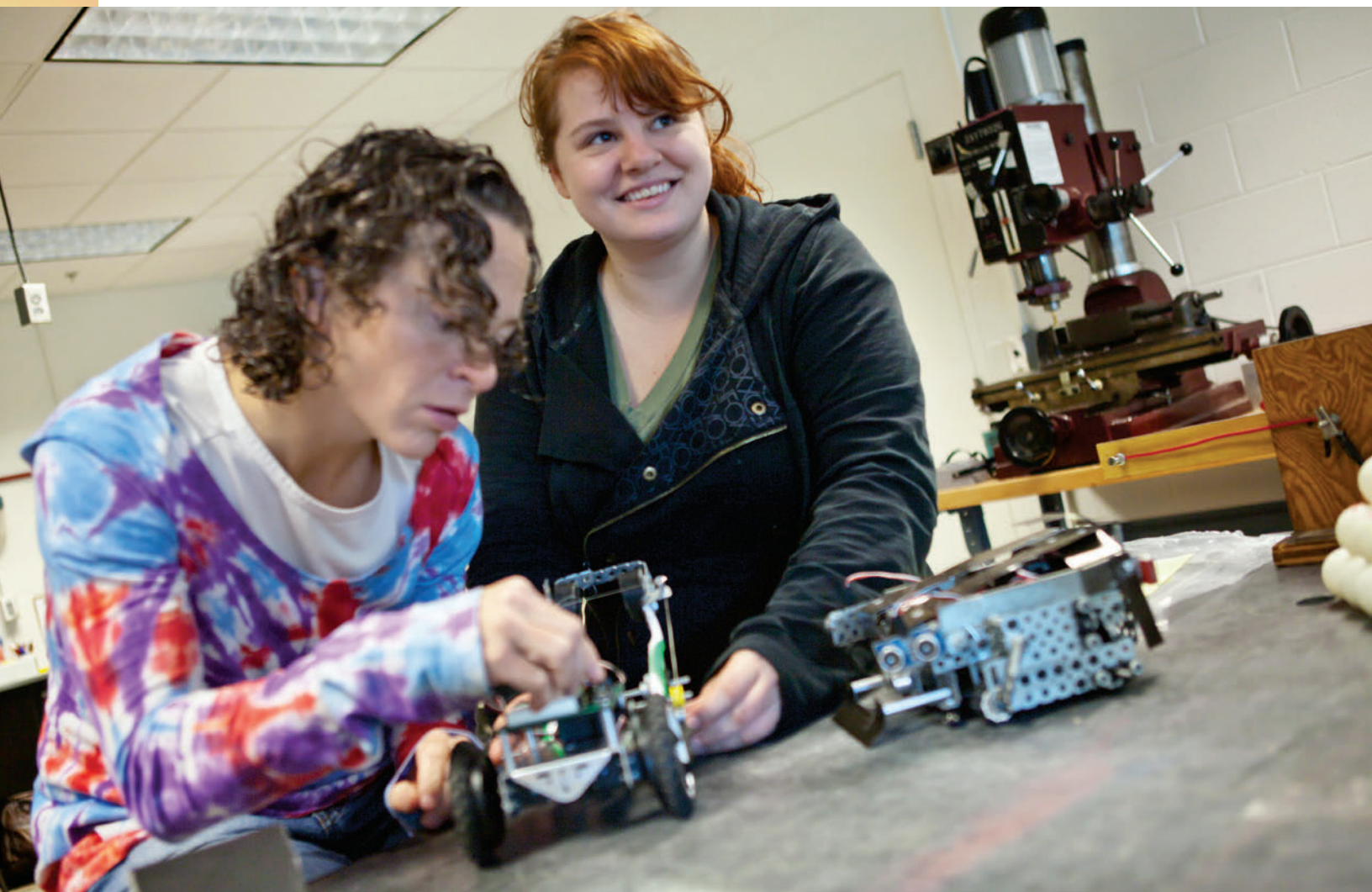
Students also make time to mentor children from area schools. In October, Sheaffer and others helped middle school children build a Halloween robot. “That part is really fun,” Sheaffer said.

Folks often assume that the liberal arts and engineering are unrelated realms that don’t inform one another, Erb argued. But the truth might surprise you.

“People tend to think of engineers as serious, studious, humorless people. Certainly the serious part is true...but it’s not like brain surgery. When a neurosurgeon screws up, there’s only one corpse. But when an engineer screws up, a bridge falls down, the Challenger explodes, or 4,000 people in Bhopal, India die from gas poisoning. So there’s a demand for academic rigor that accompanies that.

“But engineering is a creative profession,” he continued. “We’re the people who brought you the automobile and the skyscraper and the airplane...we’re the people who take things Michelangelo and Jules Verne dreamed about and turn them into real-life hardware.”

“We are creating the artifacts that define the future.”





Rhoades Hall renovation means business

A state-funded, \$8.8 million renovation of Rhoades Hall provided a recent boost to the Mechatronics program, effectively doubling its floor space.

- New classrooms include five teaching labs and six research labs, including a robotics lab
- Labs are precisely tailored to suit the users' needs
- Two-story, glass-walled study area
- Green features save on energy costs while reducing the building's environmental impact

Rhoades Hall also provides space for Physics, Math, Environmental Studies, Computer Science, Atmospheric Sciences, and National Environmental Modeling and Analysis Center programs.

web extra:

See video at unca.edu/magazine/mechatronics



SAVING THE

Can a UNC Asheville research partnership win the race against time



HEMLOCKS

to conserve a Southern Appalachian ecosystem?

WRITTEN BY SUSAN ANDREW



he tiny parasites arrived silently, hidden among the foliage of imported nursery plants. Unnoticed, their sharp feeding tubes pierce tender bark, eventually sucking the life from their helpless hosts. They reproduce without sex, releasing untold numbers of their clones into the environment—with potentially disastrous consequences for native ecosystems in the Southern Appalachians.

THE HEMLOCK WOOLLY ADELGID, named for the tiny white, woolly masses it produces around itself on infected trees, has advanced steadily across the eastern United States. Where the infestations are worst, forests that were moist and shady even in summer—thanks to the dense green branches of hemlock overhead—are now dry and bright, the herbaceous undergrowth becoming bleached and shriveled from too much sun.

“Ecologists estimate that more than half the native range of Eastern hemlock is now affected by the hemlock woolly adelgid,” said UNC Asheville Environmental Studies Professor Kitty Reynolds, who’s

teaming up in a joint project between the university and the USDA Forest Service to address the problem.

Infestations have been especially severe in the Southeast, where the pest isn’t set back by the cold winters found further north.

Ways to rescue the hemlock are needed, and quickly. And if researchers at UNC Asheville and the Forest Service are correct, one helpful hero may come in the form of a predatory beetle no bigger than the head of a pin.

Enter *Laricobius nigrinus*, a tiny beetle native to the Pacific Northwest, where hemlocks have coexisted with the woolly adelgid for millennia. “Its life cycle is

very well synchronized with the adelgid,” said Bud Mayfield, a Forest Service entomologist working with UNC Asheville faculty and students to search for a solution to the hemlock woolly adelgid. “This predator has presumably coevolved with the adelgid in its native range.”

But it’s a different story here in the East, where no predator is present. Inserting its long, probing feeding apparatus, Reynolds explains, the adelgid fixes itself to the branch at the base of the needles, drawing nutrients from the tree’s sap. As the infestation advances, the hemlock’s foliage turns gray and falls off, and new growth ceases. Mature trees are dead within three to five years.



RACE FOR THE CURE

Reynolds and Mayfield, along with students from UNC Asheville, are exploring an integrated approach to pest management, using a biological agent—the beetles—plus the insecticide, imidacloprid. The chemical is very effective, researchers say, but its effects wear off after a few years—and the adelgid returns.

“We’re looking at the benefit to the hemlock of establishing the predatory beetles on trees that have been previously protected with insecticide,” said Reynolds, “to buy the trees some time. So when adelgids come on those trees again, the beetle can provide control.” What’s more, Reynolds explained, the trees are treated with lower rates of the chemical, reduc-

ing costs and exposure to the toxin for nearby creatures.

“Mortality in the South occurs so fast, the trees are dying before the predators have a chance,” said Mayfield. “Once the beetles are established, they’re in place as a natural control mechanism; but it takes time to build up those numbers. If we can combine these two tools, we may be able to save more trees than we could with either tactic in isolation.”

Reynolds takes a long-term view. “I doubt we’ll ever be able to eradicate the adelgid—once they’re here, they’re here,” she told UNC Asheville Magazine. “There’s no way we’ll be able to treat all the trees, but if we keep enough of them going, and reserve the genetic stock, over

generations we can breed a tree that has some resistance.”

There’s good reason to believe the beetles could help turn the tide for the great trees, Mayfield explained. One positive indicator is that *Laricobius nigrinus* feeds only on adelgids. Another is that the beetles are active in winter—a critical point, because the adelgid is also active then. Adult beetles feed on adelgid life stages from fall through spring; best of all, they actually lay their eggs in the adelgid’s egg sacs, where their larvae feed on the pest’s eggs. The hungry beetles also feed on the adults, now fixed to their feeding spot under their protective shield of fluffy white “wool.”

PARTNERING AGAINST THE PEST: *Opposite page: Kitti Reynolds, Professor of Environmental Studies (left), Dustin Neufeld '13 (center) and Forest Service entomologist Bud Mayfield are engaged in a project involving predatory beetles they hope can halt the adelgid's attack on the Eastern hemlock. Left: the white, woolly masses indicate an adelgid infestation (PHOTO COURTESY OF USDA FOREST SERVICE REGION 8 SOUTHERN ARCHIVE). Top center: senior Julie Tierney examines drill cores from hemlocks, looking for evidence that growth has been promoted through experimental treatment (PHOTO BY LUKE BUKOSKI); Bottom center: the predatory beetle, Laricobius nigrinus, is smaller than a sesame seed. Far right: Reynolds and Neufeld look for beetles by shaking hemlock branches over a canvas sheet. (ALL OTHER PHOTOS BY GALEN MCGEE)*

quick facts

Eastern hemlock

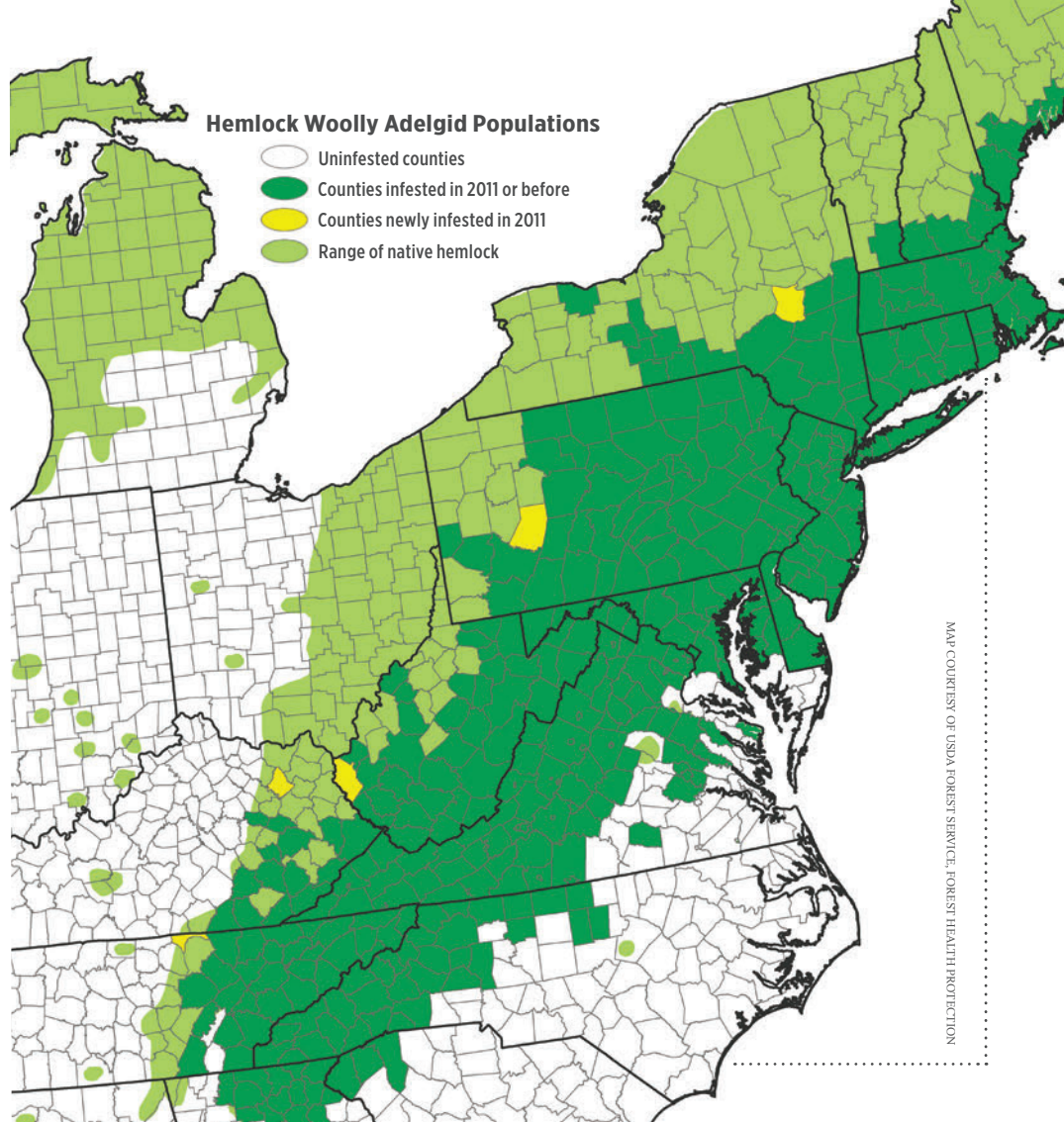
The tree has been described as a “foundation species” due to its strong influence on local ecosystems, especially along streams. “Hemlocks provide critical habitat for birds, and help keep the water cool for trout and other organisms,” USDA Forest Service entomologist Bud Mayfield told UNC Asheville Magazine. “The wood and needles decompose slowly, providing a thick organic litter on the forest floor; the trees are a source of coarse woody debris used by many creatures.”

Hemlock woolly adelgid

A tiny insect pest, which feeds on the sap of hemlock trees; accidentally introduced in Virginia on infested nursery stock from Japan in the 1950s. Untreated, an infestation can kill mature hemlocks within a few years.

Laricobius nigrinus

A beetle, native to the Pacific Northwest, where it has long been a predator of the woolly adelgid on Western hemlocks. Now the subject of a joint UNC Asheville/Forest Service study as a possible treatment against the pest, the beetle lays its eggs alongside those of the adelgid; upon hatching, the beetle larvae consume both eggs and adults.



FOREIGN INVASION: Using one outsider to conquer another

Some might question the wisdom of introducing one exotic creature—a foreigner to the local ecosystem such as *Laricobius nigrinus*—to control another, even when the target has become a critical threat. “Species introductions are not always without surprises,” said Mayfield.

Mindful of examples like kudzu, Mayfield argued, “You have to weigh that potential against the cost of doing nothing. The hemlock woolly adelgid is such a devastating pest, and time is running so short to do something about it—especially in the Southern Appalachians, where mortality seems to be much more rapid than in the northern parts of the range. You have to weigh those costs and benefits carefully.”

Mayfield expresses confidence that *Laricobius nigrinus* won’t go the way of kudzu, the invasive plant that’s been dubbed “the vine that ate the South.”

Before the vine was recognized as invasive in the 1970s, it was widely promoted to combat soil and stream bank erosion following a period of aggressive land clearing for agriculture.

“*Laricobius nigrinus* is not native to the eastern U.S., but it is not an invasive pest,” he explained. “Invasive pests, introduced from some other ecosystem, have escaped their own controls; and because their host may not have evolved any resistance or escape mechanism, their populations build rapidly and they become pests. I would not apply that term to *Laricobius*.”

“These beetles have had several years of evaluation in quarantine, and they have met very stringent requirements to show that they are prey-specific and not a problem adding to an existing problem.”

“Not only did I satisfy my own curiosity for scientific investigation, but I was able to participate directly in environmental stewardship for the landscape that I love. What a great opportunity!”

— Environmental Studies major
Julie Tierney '13



IN THE TREETOPS: Senior Julie Tierney spent a lot of time in a bucket, placing beetles on hemlock branches in hopes that the predator would become established. The beetles feed on just one thing: the hemlock woolly adelgid. (PHOTO COURTESY OF JULIE TIERNEY)

TESTING A TINY TERROR

UNC Asheville students are involved in a program of research that's poised to make real strides in approaching the problem. The project has employed recent UNC Asheville graduates Hunter Weaver and Ashley Hancock; currently involved students include Julie Tierney, Ashley Case, and Dustin Neufeld.

Tierney, a senior in UNC Asheville's Environmental Studies program, examined the health of previously-treated, infected hemlocks in the Chattahoochee National Forest in northern Georgia through an analysis of their growth rings.

"The overall purpose is to determine the right combination of chemical control—the insecticide—and biological control—the predatory beetle—in a stand of hemlocks," Tierney explained. "The work involved coring trees, and bringing the sample cores back to the lab at UNC Asheville to measure the trees' growth rates, to look for evidence of tree growth being impacted by the adelgids."

The results indicated a significant difference for trees treated with reduced levels of pesticide—even down to 25 percent of the typical dose—with larger growth rings in trees receiving both

treatments compared to those having beetles alone. "So even 25 percent of the pesticide, in tandem with the beetles, has a positive impact on the trees," says Reynolds. "We're putting less pesticide out, and getting improved growth."

Tierney presented her results at the Association of Southeastern Biologists conference at the University of Georgia last year, and also at a UNC Asheville Undergraduate Research Symposium. "I was so excited to participate in real investigative research on something so important," said Tierney, a native of Cary. "Not only did I satisfy my own curiosity for scientific investigation, but I was able to participate directly in environmental stewardship for the landscape that I love. What a great opportunity!"

Professor Kitti Reynolds points to the benefit to society. "We see potential impacts for everyone from individual homeowners to public agencies including the National Forests and the Park Service," Reynolds said, "because these agencies spend a lot on adelgid control."

The project has some less obvious benefits, too, according to Reynolds. Involvement by young women in

programs like these is important, says Reynolds, as women have traditionally been less visible in scientific and technical arenas.

"Women are still regarded as an underrepresented minority in science," Reynolds told UNC Asheville Magazine. "According to the Association for Women in Science, women represent 50 percent of the population and capacity for innovation in the U.S., but only 24 percent of the science, technology, engineering and math workforce." In contrast, Reynolds said, "Bud and I have worked with an equal number of men and women students."

Above all, there's the chance to save these majestic trees, while perpetuating the moist, diverse habitats they create for other species. "There's just something special about walking into a grove of hemlock trees where the trunks are two to three feet in diameter, and they're soaring a hundred feet in the air," Mayfield said. "People love hemlocks and the trees have a key role in ecosystems. People really want to be able to save hemlocks if they can."

“I realized that understanding Chinese culture is not something you can just learn from a book.” —Erin Litke '13

THE INTERNATIONALIST

Erin Litke's global education

By Jon Elliston

ERIN LITKE, a 22-year-old UNC Asheville senior, was born in New York. Even so, “I don’t really consider myself to be from anywhere,” Litke says—which makes sense, in view of her studies and globetrotting.

Litke, who’s pursuing a double major in German and International Studies, with a minor in Asian Studies, is presently in Germany for a year of study abroad. And she spent five weeks this summer studying in China on a scholarship to Shanghai’s Fudan University.

We caught up with Litke recently by email to learn about her China experience.

How was your time in Shanghai? What were the highlights?

My experience there was fantastic. I remember vividly the night the university took us on a cruise down the Huangpu River. Shanghai really comes alive at night; after dark most of the skyscrapers put on moving light shows like fireworks or waterfalls on the sides of the buildings, so we got a great view from our riverboat.

We also took weekend trips to see some historical sites, such as the lingering gardens in Suzhou and the West Lake in Hangzhou. The classes were also very enjoyable. It was interesting to get a Chinese perspective on subjects I had already studied in the U.S.

What were the biggest challenges?

The workload for the classes was very heavy, coming close to a full semester’s worth of work in a period of five weeks. Also, just figuring out how things worked there was challenging at first, but luckily I speak enough Chinese to get around.

What were the lessons you took away from the experience?

I already knew a lot about China from classes and personal research, but when I got there I realized that understanding Chinese culture is not something you can just learn from a

book. It was important to experience a culture vastly different from my own and begin to learn how to navigate it.

I was impressed with the Chinese students that I met. They were well informed about world events and eager to learn about other cultures. I was surprised how open for discussion “sensitive” topics were with most of the Chinese people I met.

While at Fudan I discovered a graduate program that I am now considering applying for once I graduate. Also, unrelated to my studies, I am very interested in martial arts and would love to eventually have the opportunity to study martial arts in China. One way or another, I definitely believe that I will go back eventually, and I’m already looking forward to it.



JET SET: *Erin Litke got immersed in Chinese culture this summer while on a scholarship to study at Fudan University in Shanghai. Now she's off for a year of study in Germany.*



ERIN LITKE

DIG THIS!

The gods ate chickpeas—who knew?

By Hannah Epperson '11

THE DISCOVERY OF an ancient offering of chickpeas to the Etruscan gods was just one of the fascinating finds made over the past few years by a team of faculty and student archeologists at the Cetamura del Chianti dig site in Tuscany, Italy, where some UNC Asheville students and faculty worked during summer, 2012.

“When we think of ancient cultures, we think of monumental architecture and marble statuary,” says Laurel Taylor, UNC Asheville classics and art lecturer, and president of the Western North Carolina chapter of the Archaeological Institute of America. “This is a very different kind of place.”

For three years, Taylor has taken students to an archeological field school at Cetamura del Chianti to work and learn on a real archeological dig. Lora Holland, a UNC Asheville classics professor, also participates in the dig and runs the lab at the nearby Badia a Coltibuono, a well-known Italian vineyard and medieval abbey where the artifacts are brought for processing. There they join faculty and students from Florida State University and New York University, along with various Italian scientists, and spend five weeks excavating and examining finds from an ancient Etruscan sanctuary and artisan workshop.

“They were pulling up really cool stuff, like ceramic tiles,” says UNC Asheville student Kat Holloway '13, an art major. “I’m a ceramics concentration, and I was really surprised at how much of the material we were entrusted with.”

A Neolithic ax head, metal containers, and grape pips also were discovered.

“These finds tell us about the daily life of common people, which sometimes gets overlooked,” says Sally Tucker, a senior interdisciplinary major.



PHOTOS COURTESY OF LAUREL TAYLOR



UNDER A TUSCAN SUN:

The Badia a Coltibuono vineyard and former monastery in Tuscany hosts an archaeological project that provided students with first-hand experience at a real dig this summer.

“These finds tell us about the daily life of common people, which sometimes gets overlooked.”—Sally Tucker '13

The discovery of organic matter, such as animal bones, is especially exciting and unusual. Tucker made one such find.

“The grape seeds were in the flotation,” Tucker says, describing the archaeological technique of sieving soil through a water basin to reveal the contents. “One of the Italians saw it, and he was like, ‘Get out of my way, that’s a grape pip!’”

While organic remains had been discovered at the site before, most organic material was burned as offerings to the gods. “The ultimate hope is that they’ll look at the DNA, and find out the relationship to grapes that we know

were grown in the region in later periods,” Taylor says.

The students didn’t spend all their time in the trenches, however. Weekends provided time to visit the nearby cities of Florence and Siena, and attend events like the Florence Gelato Festival.

“It’s a different way for students to experience college life,” says Holland. “The mental stimulation of being in Tuscany, experiencing new foods, trying to get along where you don’t know the language—it’s such a profound experience that the students are sharing.”

Q&A: WEATHER DATA MISSION CONTROL

NOAA's National Climatic Data Center, UNC Asheville enjoy a healthy symbiosis

By Kathleen DesMarteau

THE WORLD'S LARGEST repository of climate information resides in the heart of Asheville, with close ties to UNC Asheville. NOAA's National Climatic Data Center (NCDC) has been headquartered in the Land of the Sky since 1951, serving as the steward of U.S. weather information and providing weather data services to scientists and industry around the world.

Its proximity was a prime motivator for the formation of UNC Asheville's Department of Atmospheric Sciences in the early 1980s. Tim Owen '92 (Atmospheric Sciences), is operations planning officer at NCDC, and a former adjunct professor at UNC Asheville. We caught up with him to hear more about this productive partnership.



DROUGHT MONITORS:

Greg Hammer '92 (left) and
Jake Crouch '07 prepare to brief
the public on the latest drought
conditions in the United States.

click it:

www.atms.unca.edu

www.ncdc.noaa.gov

nemac.unca.edu

NCDC has a far-reaching charter as keeper of U.S. weather data. What are its key focus areas?

Our mission can be summarized in three "S's": science, stewardship of data, and service of data. The science aspect supports quality control of our data holdings. The stewardship is making sure we handle the data appropriately — safely storing it and providing ready access. We also provide use-inspired service and product development. One of our most popular products is called 'climate normals.' The energy industry is very interested in it for setting rates and making other decisions.

What are some developments at NCDC that benefit UNC Asheville students?

We're really excited about the Cooperative Institute for Climate and Satellites, an effort affiliated with North Carolina State University that reaches students and faculty in the entire UNC system. We also have a strong collaborative relationship with UNC Asheville's National Environmental Modeling and Analysis Center (NEMAC), and the Renaissance Computing Institute at UNC Asheville's Engagement Site downtown. Both of those groups are engaged with UNC Asheville students, and it makes for a great partnership, bridging to other federal agencies in the community.

How does interaction between NCDC and the university help our students and graduates?

Not surprisingly, NCDC is a frequent employer of UNC Asheville students. Having experience working in the federal sector is powerful; it gives you an opportunity to see public service in action. Because we hold such a vast array of information, our interns gain knowledge that will benefit them in many endeavors.

What's one of the coolest research projects you are working on right now?

I'm a member of the National Phenology Network. Phenology is the study of the natural environment and its changes, such as the seasonal green-up and loss of leaves. There is great interest in knowing when the onset of spring will be, and how it may be changing with climate variability. We help the U.S. Department of Agriculture with updates to the plant hardiness maps you see at nurseries. It's really an interesting area.

Beyond the Bachelor's

UNC Asheville enables atmospheric science professionals to continue their education at the post-baccalaureate level with certification through its Climate Change and Society program. The current cohort is covering topics such as how human activities affect future climates, and methods for communicating atmospheric science information to the general public.

Tim Owen, operations planning officer for Asheville's National Climatic Data Center, said his staff has made good use of the program as they work to communicate climate science in a meaningful way to the public. "Climate literacy' is a phrase we use a lot," Owen said, "and it's a very important part our service mission to help people understand what's going on with the climate in straightforward language."

Location, location

Why in the world is Asheville the hub for our nation's climate data?

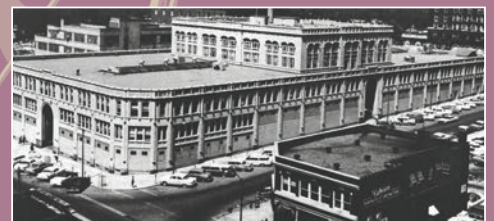
The answer involves the historic Grove Arcade. In 1942, the government needed a place to store postal records and took over the 1920s-era building downtown from retail tenants. The postal plans didn't materialize, but by the late 1940s, the government needed to store another collection.

At that time, weather records were stored as hundreds of thousands of individual punch cards. The government was looking for a building big enough to hold the punch card machinery and records — within a day's drive of Washington, D.C. The Grove Arcade became home to the National Weather Records Center of the U.S. Weather Bureau. In 1995, the operation, by then called the National Climatic Data Center, moved to its current location in the Federal Building on Patton Avenue.



National Climatic Data Center by the Numbers

- 15** Percent of staff are UNC Asheville alumni
- 6,500** Terabytes of data archived (equal to about 7.1 billion Kindle books)
- 1,000** Terabytes of data provided to users annually
- 150** Years of weather data archived
- 30** Years of satellite weather data collected



RECORD COLLECTION: *The historic Grove Arcade once housed government climate data.*

A DAY IN THE LIFE

Three student athletes offer a snapshot of life in the collegiate fast lane

By Susan Andrew and Mike Gore

Discipline. Persistence. Concentration. Shattering the crass stereotype of the dumb jock, these students show it's possible to maintain a winning record both in the classroom and on the team.

Bobby Castro
GPA: 3.85, Honor Roll
Junior, Health & Wellness Promotion
Defensive Captain with the Bulldog Soccer Team



A day in his life: Castro begins at 8 a.m. with Chemistry and Health Communications classes, followed by a weight-lifting workout. After lunch, he's in Chemistry Lab for three hours, then it's soccer practice until 6:30. After that he heads to the training room. He'll catch a quick dinner off campus, where he gets some studying in. "I go to Jersey Mike's so often, I get a lot of points for free subs!"

Future plans: Further study to be a physician assistant; hoping to attend Duke or Wake Forest. "I think my major has prepared me well—my teachers always challenge me to learn more."

How he decompresses: Tuesday and Thursday are his catch-up days, as he has only one class. For down time, Castro goes bowling, or takes a drive on the Blue Ridge Parkway.

Extracurriculars: The Order of Pisgah, the Student-Alumni Association, plus the Homecoming and Student Leadership Award Committees

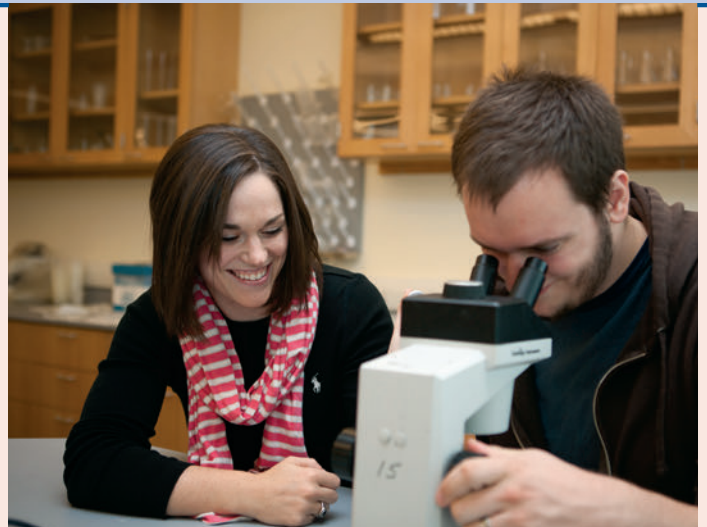
A day in her life: During the fall basketball pre-season, Blaylock's day starts at 7 a.m. with an hour of running for cardio training. That's followed by a workout with her coach, after which she's in class (Nutrition and Pathophysiology) until noon. After lunch it's rehab—Blaylock is recovering from foot surgery—followed by Sociology and Psychology classes. She'll play a pickup game for an hour, then head home to make dinner, study, and get to bed early.

Future plans: Blaylock is applying to 10 medical schools; her first choice is Virginia Commonwealth University's medical program in Richmond.

How she decompresses: "I have no classes on Friday; I use this as time for myself. As a student-athlete, you learn early to manage your time. I find it really important to take advantage of spare 15- and 30-minute time blocks during my day. I try to get all of my work done early in the week so weekends can be free from school."

Small indulgences: "I LOVE salted caramel ice cream from The Hop!"

Grace Blaylock
GPA: 3.80
Senior, Health & Wellness Promotion
Shooting Guard with the Bulldog Women's Basketball Team



Leah Wormack,
GPA: 3.9, Dean's List
Sophomore, Chemistry
Power Forward/Center with the Bulldog Women's
Basketball Team



A day in her life: Wormack's alarm goes off at 4:50 a.m. and she heads off to the training room for a workout before basketball practice at 6 a.m. Then it's a quick shower, and she's off to classes (cell biology, organic chemistry, and Spanish). By then it's noon and she's in the training room again before grabbing lunch and heading to a 6-hour organic chemistry lab. By 7:45 p.m. she's getting dinner and catching up with her suite mates before getting to bed early.

How she decompresses: "I love the game. Playing is a great stress reliever because it allows you to take out any aggression, and by the time we're finished, I don't have the energy to be stressed anymore!"

Future plans: Dental school; hopes to be an oral surgeon. Meantime, Wormack hopes to continue undergraduate research in gas kinetics she began over the summer, exploring possible replacements for substances that deplete Earth's ozone layer.

Favorite indulgence: Sushi. "A few of my teammates and I treat ourselves to 'Sushi Sunday.' The waitresses at Green Tea probably have our orders memorized—we go every week!"



click it:

For the latest news, rosters and schedules for all 14 UNC Asheville Division I teams, visit uncabulldogs.com.

★ **SWIMMING:** UNC Asheville has a swim team for the first time in more than 35 years, as the Bulldog women's team began competition this year under new coach Elizabeth Lykins. In September, the Bulldogs delighted a capacity crowd by taking five first-place finishes out of 10 events against Mars Hill College. Alessandra Troncoso and Galen Broido each won two events for Asheville. The Bulldog 200-yard medley relay team won its race by more than 10 seconds in the first meet of the event. The season concludes with the Coastal Collegiate Swimming Association championship in late February 2013.

★ **VOLLEYBALL:** The UNC Asheville volleyball team is showing great promise this season. The Bulldogs have three freshmen starters in their lineup, and a tough early-season schedule has prepared them for the rigors of the Big South Conference. Asheville has shown great resolve this year by winning three matches in five sets, including victories over Western Carolina and defending Big South champion Liberty. In both matches, the Bulldogs rallied for wins.

★ **SOCCER:** The UNC Asheville women's soccer team continues to build under the steady leadership of third-year coach Michelle Demko. The Bulldogs have posted some impressive wins this year. Sophomore forward Kaitlyn Eckert is among the scoring leaders in the Big South, while sophomore goalkeeper Heather Muller is one of the league's best. Meanwhile, the men's team is one of the youngest teams in the nation in 2012. The Bulldogs have been improving with each match, losing five matches by just one goal this season.

★ **CROSS COUNTRY:** The UNC Asheville men's and women's cross country teams are both much improved this season. On the women's side, the Bulldog harriers finished higher than regionally-ranked Charlotte in the first meet of the season at Western Carolina. Senior Emma Bussard has been Asheville's top runner all year, as she won the UNC Asheville Invitational in late September. On the men's side, the highlight of the season was winning the UNC Asheville Invitational. Coach Jesse Norman's team dominated the meet, which included a first-place finish from sophomore Kevin Paradise.

CLASSnotes



Drop us a line!

We love to hear from alumni—and so do your classmates! So be sure to send us your accomplishments, career moves, family news, fascinations and celebrations. Either log on to alumni.unca.edu or send an e-mail to alumni@unca.edu.

1966

Nancy Dillingham's book of poems "Home," from March Street Press (2010), was nominated for a 2011 SIBA award. Her newest work, "American Rural," was released in June.

1970

Chris Kline King retired from IBM after 31 years.

1971

Donald James ("Daffy") recently published his novel, "Snowflake," as an e-book through Barnes & Noble (under the pen name Richard James).

1974

Blaney Hines retired as an attorney for Legal Aid of North Carolina and is publishing short stories in small literary journals.

1975

Vicky Beard retired from Rutherford County Schools after 31 years of service.

1980

Ron Caldwell published his first book, "Days and Nights in Parisienne Heights," in June 2010.

1981

J. Chris Frank serves as the Group Vice President for Klockner Pentaplast in Shanghai.

1982

Phyllis Robertson won the 2012 Paul A. Reid Distinguished Service Award for Faculty at Western Carolina University.

1984

C. Thomas Steele, attorney and equity member at Wishart Norris Henninger & Pittman P.A. in Burlington, N.C., was honored in April by UNC Asheville's chapter of Beta Gamma Sigma.

1986

Vickie Pruett Hoffman works as a Human Resources Administrator at GoDaddy.com. She lives with her husband, **Donald Hoffman** '88, in Arizona.

1988

Donald Hoffman works in sales at The Guardian Life Insurance Company.

1990

Jennifer Forsyth was named the National Editor of The Wall Street Journal in October 2011.

1992

Robert Coxe was recently elected President of the Pennsylvania Academy of Science. He works as an Ecologist for the Delaware Natural Heritage and Endangered Species Program.

1993

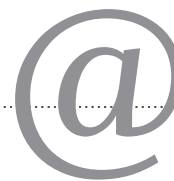
Dahn Cutshaw Stucker and her husband, Tyrone, launched Southern Dream Home Builders in Jonesborough, Tenn.

Stephen Tharrington received a master's in Business and Marketing Education from N.C. State University. He works as a business and marketing instructor in the Cleveland County schools.

Dreama Wilson has been elected to serve on the executive board of FIRST Community Parent Resource Center, which serves individuals with disabilities and their families in WNC. She was also elected to the Consumer Family Advisory Committee of the Western Highlands Network.

1994

Jessica Munday was recently selected as Charleston's "Marketer of the Year" by the American Marketing Association. She is the Founder and President of Trip Solutions, Inc.



Sarah Cain, a History major certified to teach history and social studies in grades 6–12, has been named Asheville City Schools Principal of the Year for 2012–13.

1995

Jennifer-Anne Conklin married John Hensley in January. She works at N.C. State University in the College of Education's Development Office.

Michael England recently completed a Master of Arts in Religion at Liberty University.

Jesse Ferrell works at AccuWeather as Social Media Coordinator. He was married on August 11.

Kimberly Hixson is a Senior Accountant at Linamar, N.C.

Shannon Knupp works as the Director of Compensation and Benefits at the Guitar Center in the greater Los Angeles area.

Suzanne Rohlifing Windsor received a Psy.D. in Clinical Psychology from the Georgia School of Professional Psychology in 2011, and works with citizens with developmental disabilities at Northwest Resource Center in Bossier City, La.

1996

Penny Harris received the Statesboro Herald-sponsored Service to Mankind Award. Penny works with Save the

Animals Rescue Society, an agency she helped found.

Christine Kavanagh was promoted to Director of Sales for Aloft Asheville Downtown hotel, which opened in August.

1997

Shannon Davis was promoted to Associate Professor of Sociology with tenure at George Mason University. Her co-authored book, "Methods of Family Research," Third Edition, was published in July.

Sergio Mariaca has been serving on the National Board of Directors for the Autism Society of America since 2011. He is

also the President of Mariaca Wealth Management, LLC.

Mark Robinson accepted the CEO position at Lake City Medical Center in Lake City, Fla.

1998

Alice Burnette works as a music teacher at New Dimensions Charter School in Morganton.

Carolyn Ellison is now serving as the Executive Pastoral Assistant at North Asheville Baptist Church.

Cheryl Whitworth has been the owner and director of Asheville Dance Theater, Inc. for the past 10 years. She has coached the UNC Asheville cheer and dance team for the past 13 years.

Homecoming

February 21-23

Homecoming Highlights Include

Alumni Welcome Social **NEW!**
Basketball Double-header
Bulldog Day of Service **NEW!**
Donor Reception
Homecoming Dance
Step Show
Student Org & Departmental Reunions **NEW!**
Tailgate



alumni.unca.edu/homecoming

ALUMNI PROFILE: MICHAEL MATTHEWS

Speaking of his future, Michael Matthews '99 says, "The sky's the limit—no pun intended," but you have to grin. He is, after all, the South Mid-Atlantic Regional Sales Director for Cirrus Aircraft.

It's a job in which he wears many hats. "I plan and manage events, manage and operate my own Cirrus aircraft, run my business within a budget from Cirrus Corporate, and create new



business leads via local chambers of commerce and partners, as well as customer referrals."

He gets more altitude now than he could as a freshman at UNC Asheville on a basketball scholarship, but that's how college started for Michael, who said he was recruited by former Bulldogs player and assistant coach Andy Herzer. "I chose Asheville because of the people. I felt an instant bond with my teammates, my adviser [Dr. Bob Yearout] and the community."

Matthews ended up with a major in Management and a concentration in Marketing. "Gina Miller and Michelle Patrick taught a majority of the marketing classes and together they kept me challenged, which pushed me toward that focus. Dr. Yearout was instrumental in me following my passion of aviation and making it a career."

One gets the impression that Michael spends more time in the air than on the ground these days. "My typical day consists of several hours of flying," he said, in addition to hours on the phone and emailing customers and community members. Best of all, none of it seems like work, he said. A major perk of the job is that his family gets to travel with him. "My boys have been passengers in my airplane since they were babies. They are growing up in a Cirrus."

1999

Amanda T. Edwards began serving as the Chapter Executive of the WNC Regional Office of the American Red Cross in May. Amanda has served for 8 years as the Executive Director of The Literacy Council of Buncombe County.

Richard Kent is currently employed at the University of Wisconsin-Madison as an Assistant Professor in Mathematics.

2000

Laura Bibb joined Haynes Benefits in April. She received her J.D. from the UNC School of Law in Chapel Hill and was promoted to partner in the global

law firm, K&L Gates LLP. Holly is a member of the consumer financial services group in the firm's Washington, D.C. office.

Holly Spencer Bunting was promoted to partner in the global law firm, K&L Gates LLP. Holly is a member of the consumer financial services group in the firm's Washington, D.C. office.

Bryan Farr is founder and president of the Historic U.S. Route 20 Association, a nonprofit promoting the cultural importance of the economic development of cities, towns and communities along U.S. Route 20.

Emily Gillespie has accepted a tenure-track faculty position in the Department of Biology at Marshall University.

Ardie Hollifield is a Senior Policy Analyst in the Division of Consumer Protection at the Federal Deposit Insurance Corp. in Washington, D.C. In May, she received a Master of Public Policy degree from George Mason University.

India McHale and Arvind Menon were married in November 2011 in Thiruvananthapuram, India, and in January celebrated with a reception in New Orleans. India is pursuing a Ph.D. in Higher Education.

2001

Elizabeth Underwood earned a Ph.D. in Public Policy with a Higher Education concentration from the University of Arkansas.

2002

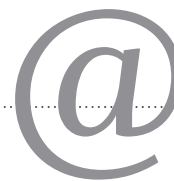
Scott Adams and **Erin Cox** '03 recently relocated to Charlotte from the Washington, D.C. area. Scott is a transportation planner for STV, Inc. Erin works as a multimedia marketing associate for National Public Radio.

Athena Rayne Anderson graduated this past May with a Ph.D. in Ecology.

Omosalewa Oyelaran is currently serving in the Peace Corps in Botswana.

2003

Troy Shriver works for Brooks Engineering Associates. He earned a Master of Geography degree from Appalachian State University; he and wife **Kristina Shriver** '07, reside in Asheville.



2004

Ben Betsalel will be moving to Mekelle, Ethiopia, to teach at Tigray College of Art.

Mary Arfmann recently graduated with a doctorate in Physical Therapy from UNC Chapel Hill.

C. Tate Holbrook married **Cecily Rogers**. Tate earned a Ph.D. in Biology from Arizona State University in 2011, and is working as a Visiting Assistant Professor of Biology at Lynchburg College in Virginia.

Sonsera Kiger was awarded the prestigious honor of \$40,000 in equity-free capital from Start-Up Chile to establish an arts market-

ing collaborative, entitled ¡Sí, Santiago!, in Santiago, Chile.

Margaret O'Neill recently accepted a position as Accounting Manager with Intelligent Access Systems in Raleigh.

Melissa Suzanne Reams will be graduating from Armstrong Atlantic State University with a Master of Public Health degree.

2005

Ian Austin received the Mississippi Bar Foundation Award from the Mississippi College School of Law.

Jaime Jones accepted a position as manager of the University of Virginia's Mountain Lake Biological Station, a 100-bed

residential field station at the top of Salt Pond Mountain in Pembroke, Va.

2006

Belinda Rae Brown Gray married Matthew Gray in October 2010.

Maribeth Kiser joined Journatic news service, where she designs pages for news organizations across the country.

Tod Leaven has moved back to Asheville and is practicing law with the Dungan Law Firm.

Matthew Stone married Meredith Pressley in September. He began graduate school at Western Carolina University in the Masters of Public Affairs program in August.

Tiffanie Tatum works for N.C. State University as a contract assessment item writer for a project conducted in partnership with North Carolina public schools.

2007

Mary Hes recently graduated from veterinary school and is practicing in Greenville, N.C.

Carolyn Fryberger was accepted into UNC Chapel Hill's Master of City and Regional Planning program.

Susan Osborne is a Communications Specialist with The Baldwin Group at NOAA's National Climatic Data Center.

ALUMNI PROFILE: TOM JEFFORDS

Tom Jeffords came to UNC Asheville with the expectation of majoring in Mass Communication and maybe taking some directing classes on the side. He graduated in 1996 with a bachelor's degree in Drama, concentrating in design and production, on a path that would lead him to his current gig as assistant stage manager for a touring production of Jekyll and Hyde, now scheduled to appear on Broadway.

Early in his academic career, Jeffords became fascinated by the process of the theater. As he explained it, "Theater is the collaborative act. No one person can get anything done without the assistance of everyone else. It is the quintessential superordinate goal of psychology."

The Drama department and the lively cultural atmosphere of campus encouraged his exploration of possibilities prior to settling. "You're given an opportunity to find out what interests you the most," Jeffords explained. "I remember mixing lighting for the Turtle Island Spring Quartet performance and thinking: 'This is great!'"

After graduation, Jeffords went to work with various dance companies, and did a stint at the newly minted Diana Wortham Theatre. His intent was to become a stage manager and lighting designer for dance companies.

Jeffords enjoyed steady employment in stage management, leading to his current gig, situated in midtown Manhattan with the company producing the musical from Robert Louis Stevenson's famous novella. As he explained, "I'm a very lucky person and I know it."



CLASSnotes

Kristina Shriver is an art teacher at Asheville High School. She and her husband **Troy Shriver** '03 reside in the Asheville area.

Ben Walsh earned a master's in Environmental Resource Policy from George Washington University.

Jacob Nix recently graduated with a Doctorate of Dental Medicine from Tufts University in Boston, Mass.

Devon Sanchez-Ossorio was promoted to Director of Student Activities and

Intramurals at Culver-Stockton College in Canton, Mo.

Emily Sigmon serves as the Communications Coordinator for the Community Transformation Grant with Cabarrus Health Alliance.

Stacy Stewart is currently in nursing school and will graduate in May 2013.

Brandi Veltri recently graduated with a J.D. and M.A. in Environmental Studies, with a certificate in Environment and

2008

Whitney Abbott married Ronald J. Cartier on June 23.

Bill Bernath recently earned the rank of Senior Firefighter for the Asheville Fire Department.

Faith Ross Bryant is now working at an area manufacturing company in accounting and human resources. Faith and her husband welcomed their first child this past June.

Jacob Carley completed a Ph.D. in Atmospheric Science from Purdue University, and has accepted a postgraduate position at the National Weather Service's Environmental Modeling Center in Washington, D.C.

Jonathan Corbin and **Ashley Halsey** '09 were married on June 23. Jonathan is currently working toward his Ph.D. in Human Development at Cornell University in Ithaca, N.Y.

Rachel Hollifield graduated from Lincoln Memorial University-DeBusk College of Osteopathic Medicine in May. She will be completing a residency at the Riverside Regional Medical Center in Newport News, Va.

Emily Mollish and Ryan Buckingham were married on May 12.



UNC Asheville gave Betty Seifert '83 a passion for learning. Now she's giving back.

“The education I received at UNC Asheville turned me into a lifelong learner,” says Betty Seifert.

“After spending time on the National Alumni Council, I have become more in awe of the teaching model and the quality of students that UNC Asheville introduces to the world each year.”

“My UNC Asheville professors opened up a whole different world for me. My humanities classes about the Renaissance made me want to see these things in person—they really developed my bucket list.”

To keep the quality of a UNC Asheville education high for future generations, Betty has made multiple donations and included the UNC Asheville Foundation in her will.

“My financial support will keep the university moving in the right direction for future generations,” she said. “I am proud to say that I graduated from UNC Asheville.”

Including the UNC Asheville Foundation as a beneficiary in your will or living trust is an easy way to make a meaningful gift that does not affect your current lifestyle or your family's financial security.

For more information, contact:
Julie Heinitsh
Director of Planned Giving
828.232.2430 or jheinitsh@unca.edu





Natural Resources Law and Public Interest Service Law, from the University of Oregon.

2009

Kelly Carroll graduated in May with a master's in Historic Preservation from Columbia University's Graduate School of Architecture, Planning, and Preservation. In July she began an internship at the Roosevelt Island Historical Society in New York City.

Jenna Nickerson Deal married Nathan Deal on June 2. Jenna coordinates the RIBN Nursing Project in N.C., even as she works to launch a small-scale sustainable and organic farm.

Elizabeth Fisher is pursuing a Ph.D. in Physiology at the University of Texas Health Science Center in San Antonio.

Katie Henderson graduated from Berkeley School of Law in May 2012, and now works as a Public Defender in Richmond, Calif.

Jennifer Hibbert spent three weeks in February as an off-shore meteorologist aboard a crane barge constructing an oil platform in the Gulf of Mexico. In May, she departed for Vladivostok, Russia, to work at the Orlan oil field.

Ashley Halsey and **Jonathan Corbin** '08 were married on June 23. Ashley is working towards her bachelor's degree in Diagnostic Medical Sonography at SUNY Upstate Medical University in Syracuse, N.Y.

Meghan Ibach transitioned from AmeriCorps volunteer to being the director of the Alamosa Community Gardens in

Alamosa, Colo., where staff run a free summer garden program.

Sarah Pardys is a Senior Account Executive for Employee Engagement at Edelman in Chicago.

Adrienne Pomeroy recently began teaching fourth grade at Fletcher Elementary in South Asheville.

2010

Ashby Brame is completing an MBA at East Carolina University, while working in ECU's Office of Student Development. Ashby completed a summer internship at the Biltmore Estate.

Anna Grace Deierlein is pursuing a master's in Social Work from the University of South Carolina.

Ashley Gowen graduated with a master's in Entrepreneurship from Western Carolina University in June. She works as a Market Research Analyst at a Connecticut-based environmental data company.

Ellie Johnston has been serving as chair of the national youth nonprofit SustainUS, working to advance sustainable development. Ellie led groups of young people to the U.N. climate change negotiations in Durban, South Africa, and to the Rio+20 Earth Summit in Rio de Janeiro, Brazil.

Sara Lenthall and **Bryan Greene** '08 were married on April 28 and reside in the Shenandoah Valley where Bryan works as a teacher and coach. Sara graduated with her master's of Education in College Student Personnel Administration from James

Madison in May, and works as a career counselor at Washington and Lee University.

Kaitlyn McDaniel graduated from Appalachian State University with a master's in Industrial Organizational Psychology and Human Resources. She is now working with Hawkes Learning Systems in Mt. Pleasant, S.C.

Barbara Muffoletto is the Program Coordinator at International Focus, Inc.

Christina Papandrea is a graphic designer for DoctorDirectory.com.

2011

Rachel Ambrosia is working as a Veterinary Technician at a small animal hospital in Maryland, and applying to veterinary schools.

Dylan Duffey has entered law school at Louisiana State University.

Baily Griffith has entered the Master of Library Science Program at UNC Chapel Hill.

Sarah A. Jones was recently accepted into the Wilder Graduate Scholars Fellowship Program at Virginia Commonwealth University. She

is pursuing a graduate degree in Public Administration.

Ninh Nguyen is a junior account executive at Gibbs & Soell Public Relations, based in New York City.

James Shelton is a Peace Corps volunteer currently serving in Madagascar.

2012

Edward Heidel is pursuing a Master of Education degree in the Community and Social Change program at the University of Miami.

Ayden Jones recently accepted a full-time position as Activities Director for Independent Living at Highland Farms retirement community in Black Mountain.

Austin Mack was awarded a Russian Federation State Scholarship, a full scholarship to the National Research University Higher School of Economics. He will pursue a graduate degree in Mathematics in Moscow, Russia.

Tina Masciarelli was honored with the Superior Staff Award at Haywood Community College, where she has been employed since 2008.

Leah Shapiro currently works as the Community Editor for The Laurel of Asheville Magazine.

ALUMNI DEATHS

Sue Hare Keogh '31,
March 2012

Dorothy Dunn, '40,
July 2012

Nicholas Bonarrigo '48,
September 2012

Nancy Philips Haller '50,
April 2012

Frank B. Wood '68,
March 2012

Carolyn Spear '78,
September 2012

Elaine Petty '85,
June 2012

June H. Williams '01,
September 2012

AN HISTORIC COMMENCEMENT:

The 66 of '66 included UNC Asheville's first African-American graduate

By Susan Andrew

THIS ISSUE OF UNC Asheville Magazine features a conversation with Etta Mae Whitner Patterson, who in 1961 was the first African American to enroll at the university. Because Patterson married and moved away before she finished her degree, history had to wait a little longer for UNC Asheville to graduate its first non-white student.

It wasn't until 1966 that the university presented its first diploma to an African American, Francine Delany.

Delany, who contributed a lifetime of service to Asheville and the surrounding community in support of childhood education, was a member of a celebrated class at UNC Asheville that year: The 66 of '66.

The cause for celebrating the Class of '66 goes beyond a chance pattern of repeating digits. Only a few years earlier, the college had established itself at the current North Asheville site with plans to build a larger campus. Yet by the time the new buildings opened in fall 1961, President Glenn Bushy was already talking about the next step. He wanted to see the school move toward a four-year Liberal Arts degree.

The plan was met with mixed reviews; skeptics said it was too much, too soon. But that didn't stop Bushy and his successor, Dr. William Highsmith. In 1963, the state agreed that Asheville-Biltmore College—a two-year community college—would become Asheville's four-year university.

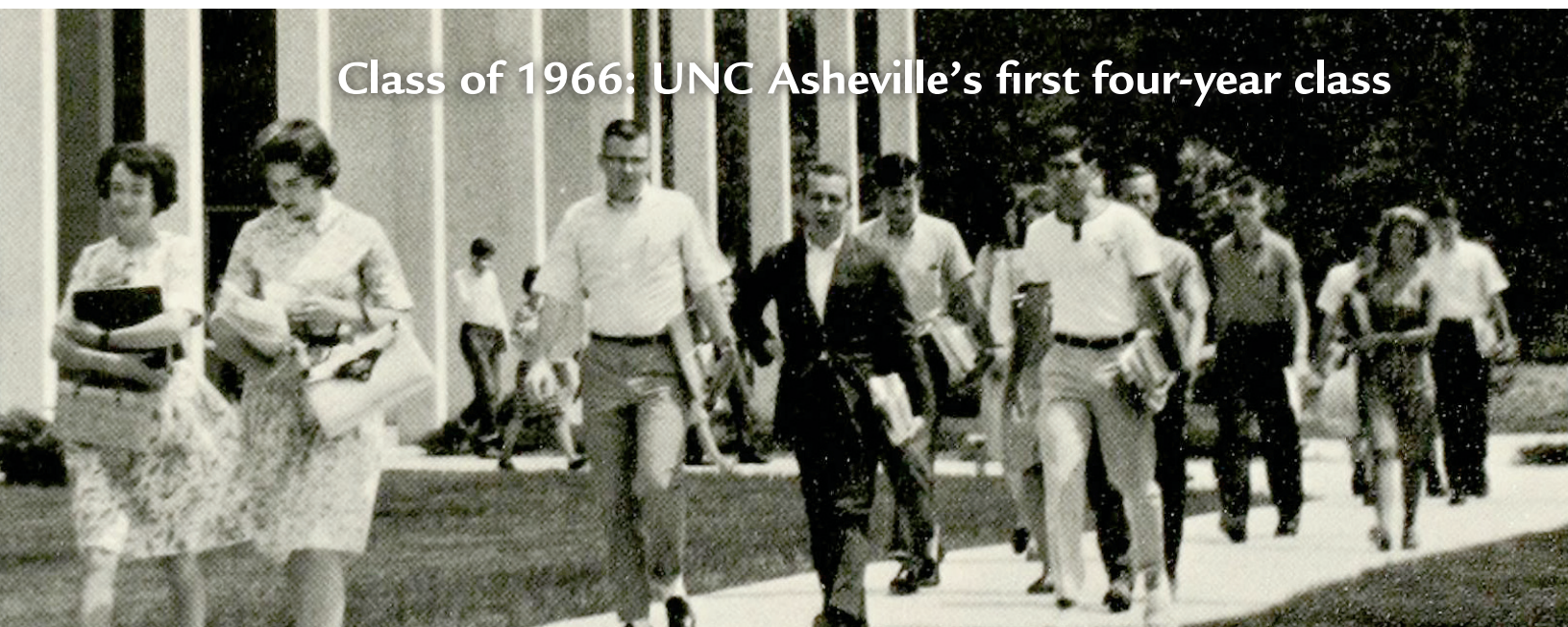
That transition produced an interesting gap: graduation ceremonies ceased for two years until the first crop of students was ready to receive their bachelor's degrees. Thus, our alumni records feature two years without graduation.


By 1966, graduates donned caps and gowns again, and the university celebrated its first four-year class—66 students in total—and began a new era, bringing a black woman to the ranks of its graduates for the first time.



Francine Delany '66

Class of 1966: UNC Asheville's first four-year class



A woman with blonde hair, wearing a blue dress and red shoes, is sitting on a yellow bicycle. She is smiling and looking at the camera. The bicycle has a basket on the front and a rack on the back. In the background, there is a building with stone walls and a black metal fence. A trash can with a recycling symbol is visible on the right.

“Sustainability is no longer about the values of the environment, it’s about developing win-win situations with new programs.”

— Maggie Ullman '06
Energy Coordinator, City of Asheville
Environmental Policy and Management
major and Economics minor

This is today's liberal arts.

Sustainability equals savings in energy, worker efficiency and tax dollars. But for Maggie Ullman, the City of Asheville's sustainability program manager, it takes creative thinking to put sustainability into action.

When Ullman, a UNC Asheville graduate, realized how many city workers conduct business around downtown, she offered them the option of checking out a bike and helmet instead of a municipal car.

The result has been quicker arrival times, less road congestion, no parking hassles, reduced fleet car maintenance, and zero pollution and fuel costs.

For these and other refreshingly smart solutions, Maggie credits her interdisciplinary coursework at UNC Asheville—combining economics, sustainability, and public policy to create a leaner, more efficient city government.

That's the power of a liberal arts education.

UNC Asheville. SERIOUSLY CREATIVE.



University of North Carolina at Asheville
One University Heights
Asheville, North Carolina 28804

making a splash

UNC Asheville has a swim team for the first time in more than 35 years, as the Bulldog women's team began competition this year under new coach Elizabeth Lykins. In September, the Bulldogs delighted a capacity crowd by taking five first-place finishes out of 10 events against Mars Hill College. *Photo by Perry Hebard*

